

AMENDMENTS TO THE SPECIFICATION:

Please amend the specification to read as follows:

Change the Title, at page 1, lines 1-2, to:

**ELECTRONIC CIRCUIT CONSTRUCTION METHOD,
AS FOR A WIRELESS RF TAG**

Insert a new paragraph starting at page 1, line 3:

This application is a division of U.S. Patent Application No. 10/191,580 filed July 9, 2002, now U.S. Patent No. 6,665,193 issued December 16, 2003.

Paragraph starting at page 1, line 4:

The present invention relates to a method for making an electronic circuit, and, in particular, to a construction therefor: article.

Paragraphs starting at page 2, line 17 through line 27:

To this end, the electronic circuit method of the present invention for making an electronic article comprises an electronic jumper having two contacts spaced apart substantially the predetermined distance, and an electronic device on the electronic jumper and having two contacts respectively connected to the two contacts of the electronic jumper.

providing an insulating substrate having an electrical conductor thereon including first and second contact sites spaced apart substantially a predetermined distance;

providing an insulating electronic circuit substrate having a length substantially the predetermined distance, having first and second contact sites substantially at first and second ends thereof, and having first and second terminals respectively connected to the first and second contact sites thereof;

mounting an electronic device to the electronic circuit substrate with first and

second contacts of the electronic device connected to the first and second terminals of the electronic circuit substrate; and

then mounting the electronic circuit substrate to the insulating substrate with the first and second contact sites of the substrate electrically connecting with the first and second contact sites of the electronic circuit substrate.

According to another aspect, an electronic article comprises a substrate having an electrical conductor thereon, wherein the electrical conductor includes two contacts spaced apart substantially a predetermined distance, an electronic jumper having two contacts spaced apart substantially the predetermined distance and respectively connected to the two contacts of the substrate, and an electronic device on the electronic jumper and having two contacts respectively connected to the two contacts of the electronic jumper.

Paragraph starting at page 4, line 8:

FIGURES 2A, 2B and 2C are plan views of three example embodiments 200S, 200M and 200L of an electronic circuit arrangement each including an electronic device 150 on an electronic circuit jumper 100 (also referred to herein as electronic circuit 100). In general, articles 200S, 200M, 200L comprise a set of articles of different sizes and/or shapes wherein each article includes an electronic circuit 100 of the same size, and wherein each electronic circuit 100 includes an electronic device 150. The number of articles that comprise the set may be any number, e.g., two or greater, and the number of different sizes and/or shapes of the articles in a set may be any number, e.g., one or greater. For example, the set of articles illustrated by FIGURES 2A-2C includes three different articles representing three different sizes and shapes. In general, the electronic circuits 100 of each of the articles of a set of articles are the same length, i.e. their longer dimension is the same predetermined distance D between the opposite ends of circuit 100.

Paragraphs starting at page 4, line 27 through page 6, line 6:

In particular, article 200S comprises a relatively smaller-size wireless article 200S having a relatively smaller size substrate 210S on a surface of which is a relatively smaller size spiral antenna 220S having terminals 222 and having a number of turns or loops 224. Terminals 222 are spaced apart a predetermined distance D, typically with turns of antenna 220 lying therebetween. A standard size electronic circuit 100 is mounted to substrate 210S, specifically by a solder or electrically-conductive adhesive connection 230 to terminals 222 of antenna 220S. Electronic circuit 100 includes electronic device 150 which is operatively connected to the opposing ends of electronic circuit 100 whereat connections are made to antenna 220S via solder or conductive adhesive 230.

Similarly, article 200M comprises a relatively medium-size wireless article 200M having a relatively medium size substrate 210M on a surface of which is a relatively medium size spiral antenna 220M having terminals 222 and having a number of turns or loops 224. Terminals 222 are spaced apart the predetermined distance D, typically with turns of antenna 220 lying therebetween. The standard size electronic circuit 100 is mounted to substrate 210M, specifically by solder or electrically-conductive adhesive 230 to terminals 222 of antenna 220M. Electronic circuit 100 includes electronic device 150 which is operatively connected to the opposing ends of electronic circuit 100 whereat connections are made to antenna 220M via solder or conductive adhesive 230.

Also similarly, article 200L comprises a relatively larger-size wireless article 200S having a relatively larger size substrate 210L on a surface of which is a relatively larger size spiral antenna 220L having terminals 222 and having a number of turns or loops 224. Terminals 222 are spaced apart the predetermined distance D, typically with turns of antenna 220 lying therebetween. The standard size electronic circuit 100 is mounted to substrate 210L, specifically by solder or electrically-conductive adhesive 230 to terminals 222 of antenna 220L. Electronic circuit 100 includes electronic device 150 which is operatively connected to the opposing ends of electronic circuit 100 whereat connections are made to antenna 220L via solder or

conductive adhesive 230.

Preferably, all of electronic circuits 100 are the same length, i.e. the distance between the respective opposing ends thereof that connect to terminals 222 of antenna 220 (e.g., to antenna 220S, 220M and/or 220L), which length is the predetermined distance D. Preferably, the pair of terminals 222 of each substrate 200 (e.g., substrate 200S, 200M and/or 200L) are “spaced apart by a predetermined distance” D so that the ends of electronic circuit 100 will always be connectable thereto, e.g., by solder or conductive adhesive. Thus, the spacing between pairs of terminals 222 and the size of terminals 222 are such that, with the tolerances of the size and positioning of terminals 222, the ends of standard electronic circuit 100 will be connectable thereto. I.e. when one end of a standard electronic circuit 100 is placed in any location on a terminal 222, the other end thereof will be somewhere on the corresponding terminal 222 so that connection may be made thereto.

Paragraph starting at page 7, line 30:

FIGURES 3 and 4 are a plan view and a side cross-sectional view of an example embodiment of the electronic circuit jumper 100 of FIGURES 2A - 2C. Electronic circuit 100 comprises a substrate 110 preferably of a dimensionally stable material such as polyimide, of predetermined length D. A conductor layer on substrate 110 is patterned, e.g., a copper layer patterned by etching, to define conductors 120 each extending from an opposing end of substrate 110 toward the central region thereof to define a space or gap 124. Solder 130 is on an area of each conductor 120 at each end of substrate 110. Solder 132 on an area at the end of each conductor 120 proximate gap 124 is reflowed to electrically connect contacts 152 of electronic device 150 to conductors 120.